IN THE CLAIMS

Please amend the claims as follows:

Claims 1-10 (Canceled).

Claim 11 (Currently Amended): Method of creating an electrically conducting bonding between a face of a first semiconductor element and a face of a thin film included in a second semiconductor element by heat treatment, comprising:

depositing at least one layer directly on said face of the first semiconductor element and at least one layer directly on said face of the ~~second semiconductor element~~ thin film, each of materials chosen for each of the layers being either a semiconductor material or an electrical conductor material, at least one being of an electrical conductor material, these deposited layers combining during said heat treatment to form a layer that provides an electrically conducting bonding between the two faces,

applying said faces one against the other, with interposing of said layers of deposited material; and

carrying out a heat treatment;

wherein the at least one layer deposited onto said face of the first semiconductor element and the at least one layer deposited onto said face of the ~~second semiconductor element~~ thin film are chosen to react in a solid phase during the heat treatment and to form a temperature stable mixture with respect to the first and the second semiconductor elements, the heat treatment not inducing any reaction product between the deposited materials and ~~at least one of the semiconductor elements~~ the thin film.

Claims 12-15 (Canceled).

Claim 16 (Previously Presented): Method according to Claim 11, wherein the first and second semiconductor elements are pressed one against the other during the heat treatment.

Claim 17 (Previously Presented): Method according to Claim 11, wherein the first semiconductor element is SiC and the second semiconductor element is SiC, the interposed layers comprising a layer of tungsten and a layer of silicon on said face of the first semiconductor element and a layer of tungsten and a layer of silicon on said face of the second semiconductor element, the mixture formed after the heat treatment comprising WSi_2.

Claim 18 (Currently Amended): Method according to Claim 11, ~~wherein one of the semiconductor elements is a thin film, and the method comprises~~ further comprising a preliminary step of defining ~~this~~ the thin film as a superficial layer of ~~a substrate~~[[,]] the second semiconductor element so as to be configured to be detached ~~from a rest of the substrate~~ therefrom.

Claim 19 (Currently Amended): Method according to Claim 18, ~~wherein~~ comprising, during the preliminary step, ~~the substrate is formed~~ forming the second semiconductor element by stacking a support, a sacrificial layer, and the thin film, the detachment of the thin film from the rest of the substrate being obtained after creation of the bonding, by dissolution of the sacrificial layer.

Claim 20 (Currently Amended): Method according to Claim 18, wherein ~~during~~ the preliminary step ~~the thin film is bounded in a substrate by a layer of microcavities obtained by ionic implantation~~ comprises an ionic implantation through the face of the second

semiconductor element for forming microcavities therein so as to define the thin film between the microcavities and the implanted face of the second semiconductor element, the ~~separation~~ detachment of the thin film from the rest of the ~~substrate~~ second semiconductor element being consecutive to the bonding heat treatment or to a specific heat treatment or to the application of mechanical forces or to the combination of a heat treatment and the application of mechanical forces.

Claim 21 (Previously Presented): Method of creating an electrically conducting bonding between a face of a first semiconductor element and a face of a second semiconductor element by heat treatment, comprising:

depositing at least one conductive layer directly on said face of the first semiconductor element and at least one conductive layer directly on said face of the second semiconductor element, each of materials chosen for each one of the conductive layers being either a semiconductor material or an electrical conductor material, at least one layer being of an electrical conductor material, the deposited layers combining during said heat treatment to form a layer that provides an electrically conducting bonding between the two faces;

forming at least one oxide layer onto at least one of the deposited conductive layers;

applying said faces one against the other, with interposing of said layers of deposited material; and

carrying out a heat treatment;

wherein the at least two conductive layers deposited onto said faces of the first and second semiconductor elements are chosen to react in a solid phase during the heat treatment and to form a temperature stable mixture with respect to the first and the second semiconductor elements, the heat treatment not inducing any reaction product between the deposited materials and at least one of the semiconductor elements, wherein the oxide of the

at least one oxide layer is chosen to react with at least one material of said conductive layers, and

wherein the thickness of the at least one oxide layer and the conductive layer with which the oxide reacts being such that the oxide formed is in a form of isolated precipitates that do not substantially harm the electrically conducting bonding.

Claim 22 (New): Method of creating an electrically conducting bonding between a face of a first semiconductor element and a face of a second semiconductor element by heat treatment, comprising:

depositing at least one layer directly on said face of the first semiconductor element and at least one layer directly on said face of the second semiconductor element, each one of these layers being either a semiconductor material or an electrical conductor material, at least one layer being of an electrical conductor material;

applying said faces one against the other, with interposing of said layers of deposited material; and

carrying out a heat treatment;

wherein the at least one layer deposited onto said face of the first semiconductor element and the at least one layer deposited onto said face of the second semiconductor element are chosen to react in a solid phase during the heat treatment and to form a temperature stable mixture with respect to the first and the second semiconductor elements, the heat treatment not inducing any reaction product between the deposited materials and at least one of the semiconductor elements, and

wherein one of the layers is deposited with an excess thickness such that a part of this layer, in contact with another of the deposited layers, combines with the other deposited layer to form said stable mixture, the other part of the layer deposited with an excess thickness, in

contact with the semiconductor element on which it is deposited, reacting during the heat treatment with the semiconductor element to form a film with ohmic contact.